Scientific and Technology Objectives (STO) on Multi-Mission Radar

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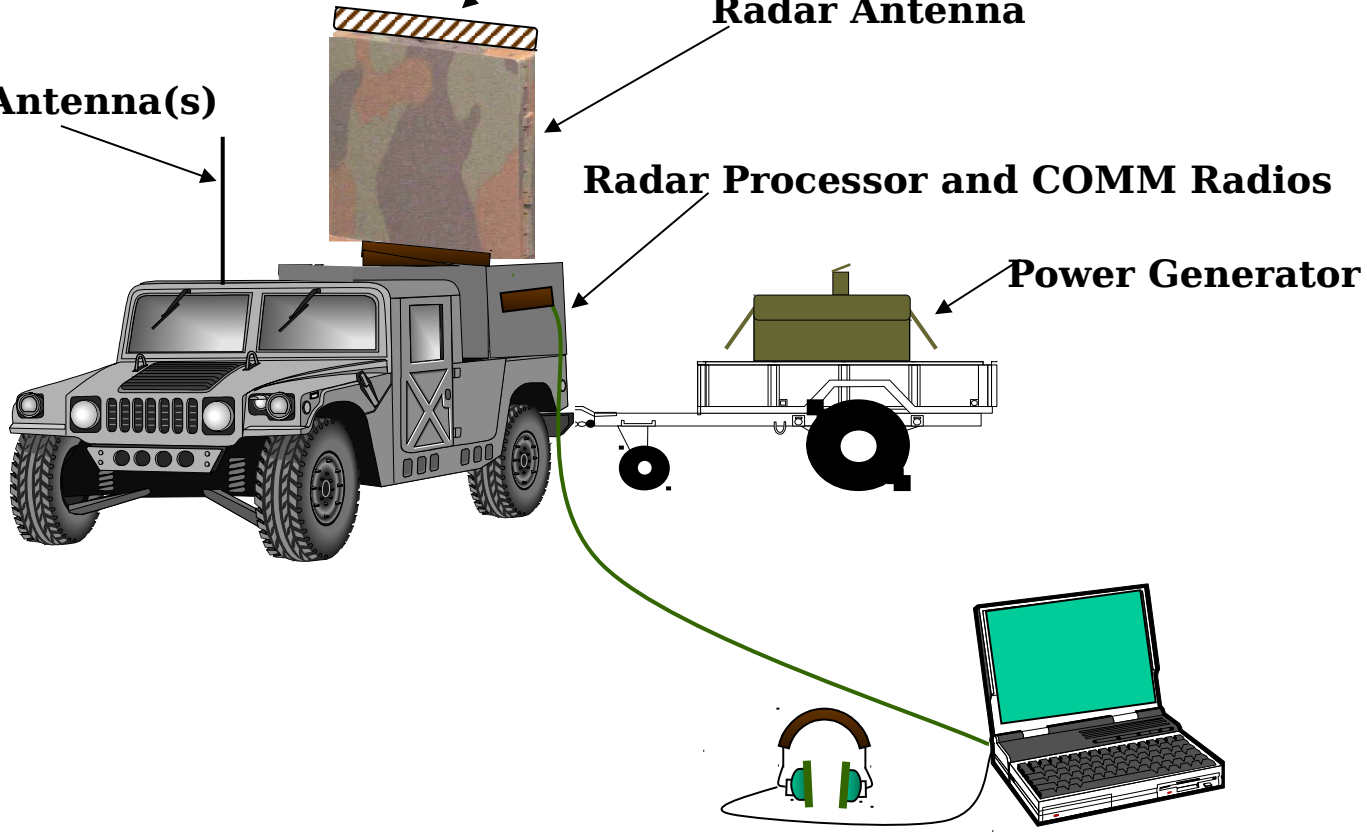
ECOM Bottom Line: THE SOLDIE

Multi-Mission Radar Program

- Demonstrate the Capability of Performing Multiple Radar Missions from a Single Host Platform
- Desired Missions:
  - Air Defense Surveillance
  - Counterfire Weapon Location
  - Fire Control
  - Air Traffic Control
- Perform Missions Utilizing Various Software Loads with Minimal or No Hardware Changes
- Goal is to Perform All Radar Functions Simultaneously

Multi-Mission Radar System Concept

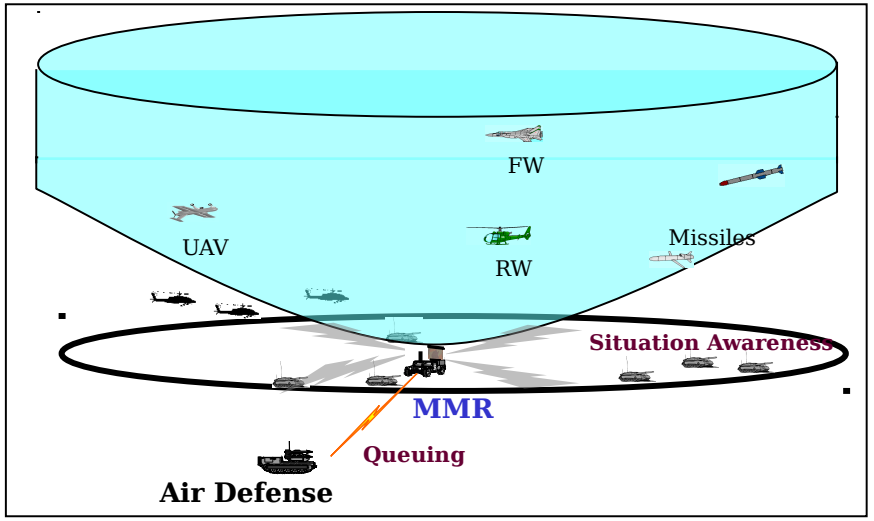


ECOM Bottom Line: THE SOLDIE

Multi-Mission Capability

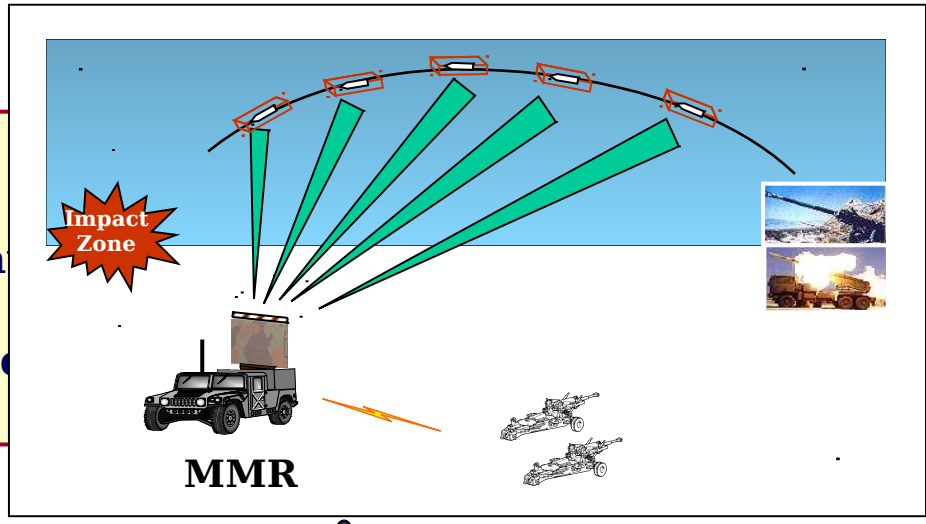
Air Defense Surveillance

- Detect, Track and Identify Airborne Targets
- Queue Air Defense Weapon Systems
- Disseminate Air Picture to Maneuvering Forces for Situation Awareness



Weapon Location

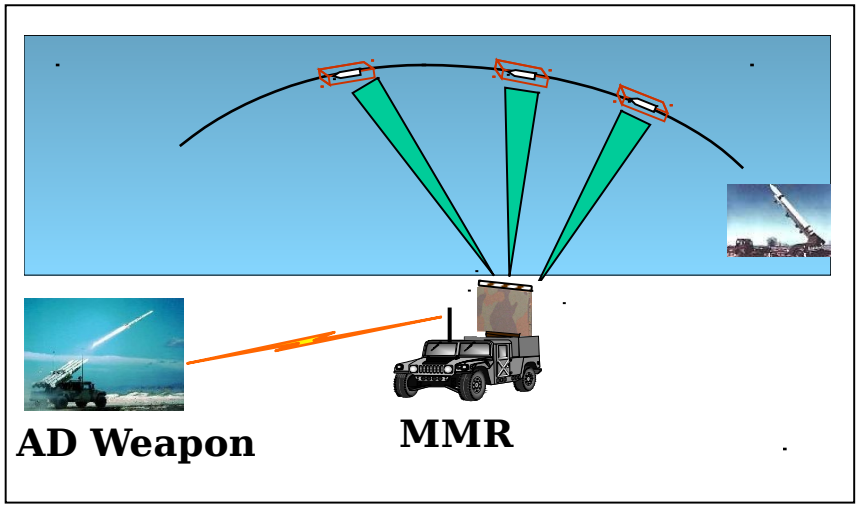
- Detect and Track Artillery, Mortars &
- Establish Trajectories to Compute La and Impact Points
- Pass Weapon Location Data to Counte Support



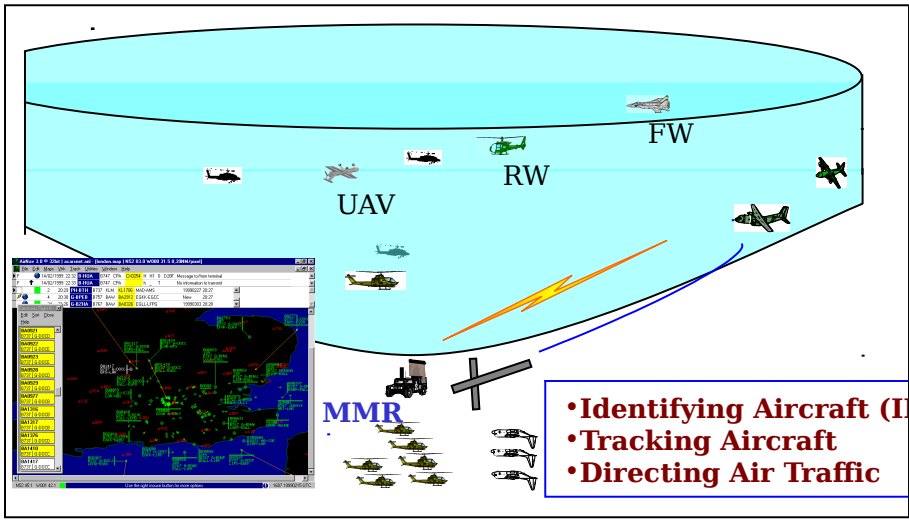
ECOM Bottom Line: THE SOLDIE

Multi-Mission Capability
(Cont.)

Active Fire Control
- Establish Accurate Target Track & Trajectories
- Pass Target Data to Weapon system for Target Engagement



Air Traffic Control
- Tracking Aircraft
- Identifying Aircraft (IFF)
- Directing Air Traffic



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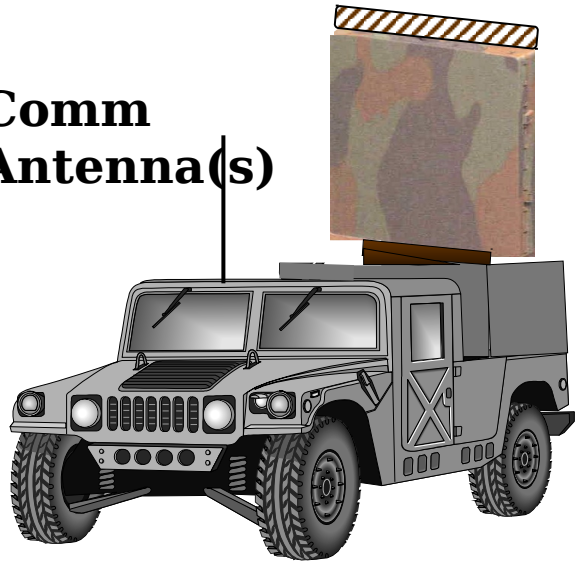
Communication

Comm Antenna(s)



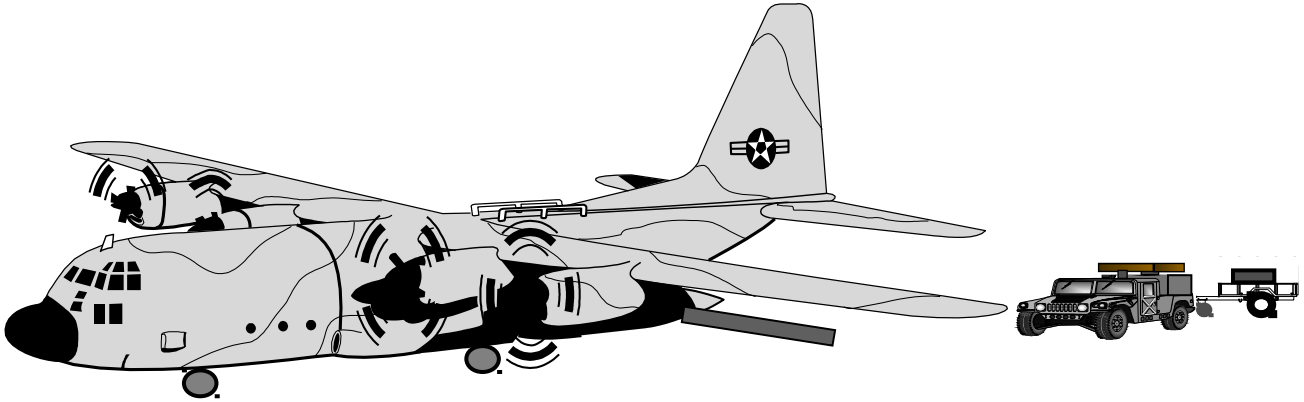
SINCGARS

EPLRS

- Provide Data Through Existing Comm Systems (FAAD C2I, AFATDS, Etc.) To:
  - Fire Control
  - Air Defense Queuing
  - Counterfire Support
  - Situation Awareness

ECOM Bottom Line: THE SOLDIE

Transportation



C-130 Transportable
In a Single Sortie

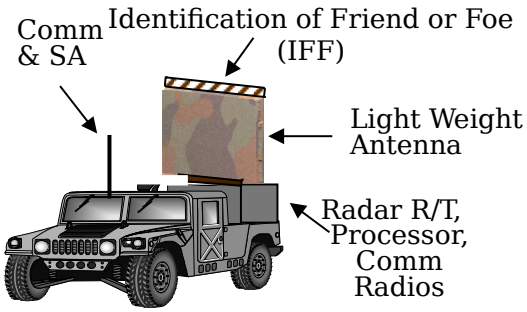
ECOM Bottom Line: THE SOLDIE

Multi-Mission Radar

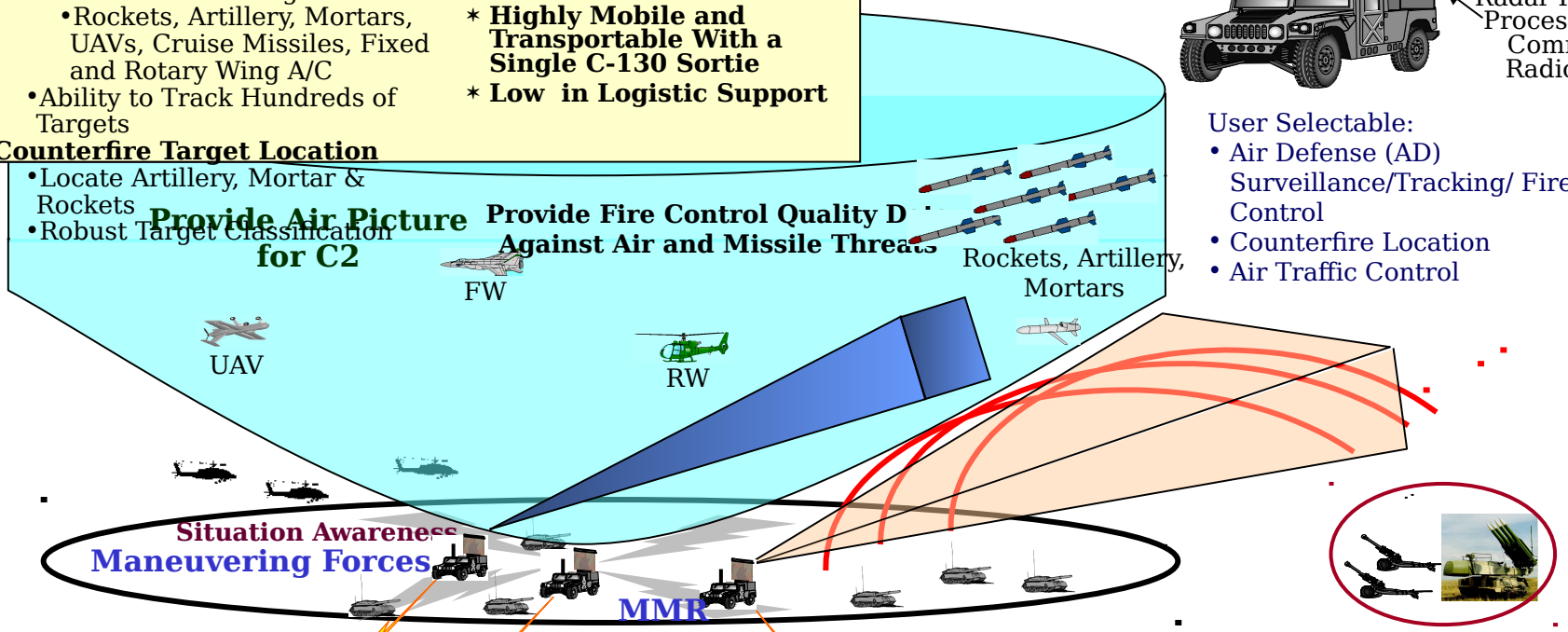
Common Hardware For Multiple Missions

- **Air Defense**
  - 360 Degree Coverage
  - Performs Search, Track & Identification
  - Provides Air Defense Cueing & Fire Control Data Against:
    - Rockets, Artillery, Mortars, UAVs, Cruise Missiles, Fixed and Rotary Wing A/C
  - Ability to Track Hundreds of Targets
- **Counterfire Target Location**
  - Locate Artillery, Mortar & Rockets
  - Robust Target Classification

- **Support Early Entry Forces and Maneuvering Forces**
- **Support Command & Control**
- **Highly Mobile and Transportable With a Single C-130 Sortie**
- **Low in Logistic Support**



User Selectable:
- Air Defense (AD) Surveillance/Tracking/ Fire Control
- Counterfire Location
- Air Traffic Control



Locate Enemy Launchers

ECOM Bottom Line: THE SOLDIE

Multi-Mission Radar Status

- FY01
  - Issued Technology Market Survey (Jan 01)
    - 10 White Papers Were Received
  - Consolidated Desired Operational Requirements
  - Conducted a System Level Study
- FY02
  - Prepared MMR Procurement Package
  - Completed Source Selection
  - Prototype Radar Development Contract was Awarded to Syracuse Research Corp./Lockheed Martin (Naval Electronics & Surveillance System)
    - Award Date: 19 Mar 2002
    - Contract Duration: 4 ½ Years

Multi-Mission Radar Development Schedule

Tasks	FY Yr 01 1	02 2	03 3	04 4	05 5	06 6
•Develop MMR Program Definition and Procurement Package						
• MMR Source Selection • Contract Award						
• System Design, PDR, CDR, Start HW and SW Development, Develop Test Plans						
• Complete HW & SW, Integration Test, Engineering Test, Modeling and Simulation Efforts						
• User Demo, Deliver Prototype, Reports, Transition to PM						

ECOM Bottom Line: THE SOLDIE